

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings of claims in the application.

1-5. (cancelled)

6. (Currently Amended) An interlaced waveguide hologram comprising:

a first holographic recording; and

a second holographic recording interlaced with the first holographic recording, wherein each holographic recording is approximately 2.5 inches in length;

~~each of said first and second holographic recordings being formed using a photolithographic mask and a view region mask, each of said masks having a series of light transmissive openings having respective selected interdistances between said openings.~~

7. (Original) The interlaced waveguide hologram of claim 6, wherein the first holographic recording corresponds to a first visual field and the second holographic recording corresponds to a second visual field.

8. (Original) The interlaced waveguide hologram of claim 7, wherein the first visual field is a right visual field and the second visual field is a left visual field.

9-10. (Canceled)

11. (Original) The interlaced waveguide hologram of claim 6, wherein the first holographic recording combines with the second holographic recording to create a three dimensional effect when in use.

12. (Currently Amended) A three-dimensional holographic liquid crystal display system comprising:

- a- a backlight;
- b- a first waveguide hologram;
- c- a liquid crystal display, and
- d- a second waveguide hologram having a first holographic recording interlaced with a second holographic recording, said second waveguide hologram being positioned between said first waveguide hologram and the liquid crystal display: each of said first and second holographic recordings is approximately 2.5 inches in length~~being formed using a photolithographic mask and a view region mask, each of said masks having a series of light transmissive openings having respective selected inter-distances between said openings.~~

13. (Original) The three-dimensional holographic liquid crystal display system of claim 12, further comprising a micro-collimator array positioned between the backlight and the first hologram.

14. (Original) The three-dimensional holographic liquid crystal display system of claim 12, wherein the backlight is collimated.

15. (Previously Presented) A method of making an interlaced waveguide hologram master comprising:

a. forming a first holographic recording by positioning a photolithographic mask in a first position over a substrate coated with emulsion and indexing fluid;

positioning a view region mask in a corresponding first position;

b. forming a second holographic recording by positioning the photolithographic mask in a second position over the substrate coated with emulsion and indexing fluid;

positioning a view region mask in a corresponding second position; said second holographic recording is interlaced with said first holographic recording, the view region mask comprises a series of blacked out regions separated by a distance of approximately 2.5 inches;

each of said photolithographic and viewing masks having a series of light transmissive openings having respective selected inter-distances between said openings.

16. (Currently Amended) The method of claim 15, wherein:

forming the first holographic recording further comprises:

positioning thea photolithographic mask in a first position over a substrate coated with emulsion and indexing fluid;

positioning thea view region mask in a corresponding first position, then forming the first holographic recording;

and, wherein forming thea second holographic recording further comprises:

positioning the photolithographic mask in a second position over the substrate coated with emulsion and indexing fluid;

positioning thea view region mask in a corresponding second position, then forming the second holographic recording.

17. (Previously Presented) The method of claim 16, wherein the first position corresponds to a right viewing field and the second position corresponds to a left viewing field.

18. (Previously Presented) The method of claim 16, wherein the photolithographic mask comprises a series of equally spaced lines, wherein predetermined lines mask holographic recording.

19. (Original) The method of claim 18, wherein each line has a width approximately equal to the width of a standard pixel.

20. (Original) The method of claim 19, wherein the width of each line is between approximately 200 to 300 microns.

21-22. (Canceled)

23. (Original) The method of claim 16, wherein the emulsion layer is formed of silver halide.

24. (Currently Amended) A method of making a three-dimensional holographic liquid crystal display system comprising the steps of

- a. providing a first waveguide hologram;
- b. providing a second waveguide hologram having a first holographic recording interlaced with a second holographic recording each of said first and second holographic recordings is approximately 2.5 inches in length being formed using a photolithographic mask and a view region mask, each of said masks having a series of light transmissive openings having respective selected inter-distances between said openings;
- c. providing a backlight and a liquid crystal display,
- d. arranging said first waveguide hologram and said second waveguide hologram between said backlight and said liquid crystal display so that said first waveguide hologram is aligned adjacent to said backlight and said second waveguide hologram is aligned between said first waveguide hologram and said liquid crystal display.

25. (Previously Presented) The method of claim 24, further comprising the steps of positioning a micro-collimator array between the backlight and said first hologram.